

FIRST REPORT

OF

THE COMMISSIONERS

APPOINTED TO INQUIRE INTO THE MANNER

IN WHICH

RAILWAY COMMUNICATIONS

CAN BE

MOST ADVANTAGEOUSLY PROMOTED

IN

IRELAND

Presented to both Houses of Parliament by Command of His Majesty.

LONDON:

PRINTED BY W. CLOWES AND SONS, DUKE STREET, STAMFORD STREET,
FOR HER MAJESTY'S STATIONERY OFFICE.

1837.

COMMISSION.

WILLIAM the **FOURTH**, by the Grace of God, of the United Kingdom of Great Britain and Ireland, King, Defender of the Faith, &c.

To Our trusty and well-beloved *Thomas Drummond*, Esq., Under Secretary of Our State in that part of Our United Kingdom of Great Britain and Ireland called Ireland; *John Fox Burgoyne*, Esquire, Colonel in Our Army; *Peter Barlow*, Esquire, Professor of Mathematics in Our Royal Military Academy at Woolwich; *Richard Griffith*, Esquire, greeting. WHEREAS an humble Address has been presented to Us by the Lords Spiritual and Temporal in Parliament assembled, requesting that We would be graciously pleased to appoint persons of competent authority to consider and report upon the principal Lines of Communication in Ireland, with reference to the comparative advantages and facilities they afford for the construction of Railways, and that with a view to ascertain the best Lines between any of the Principal Places in Ireland which it may be advisable to connect by Railways, and for which works Joint Stock Companies may be willing hereafter to apply to Parliament, We would be graciously pleased to direct such assistance to be afforded by the Board of Public Works towards a general Survey of such Lines as to us might seem fit. Now KNOW YE, that We, reposing great trust and confidence in your zeal and ability, have authorised and appointed, and do by these Presents authorise and appoint you, the said *Thomas Drummond*, *John Fox Burgoyne*, *Peter Barlow*, and *Richard Griffith*, or any two or more of you, to be Our Commissioners for the purposes aforesaid. AND Our Will and Pleasure is, that you consider, *first*, as to a General System for Railways in Ireland, in such manner, either by causing Surveys to be made of the Leading Lines, or otherwise, as may best serve to guide the Legislature in the consideration of the projects that may be brought before it. *Secondly*, as to the best mode of directing the development of said new and important means of intercourse to the channels whereby the greatest advantages may be obtained by the smallest outlay, taking into consideration not only the existing means which the country presents, but those which may be anticipated from the resources which may in future be developed. *Thirdly*, that you should make inquiry as to the Port or Ports on the West or South Coast, from whence the Navigation to America may be best carried on by Steam or Sailing Vessels; and that you should investigate particularly the Facilities for the construction of Lines of Railroad across Ireland to such port or ports in connexion with the greatest possible collateral benefits to internal communications. AND, *fourthly*, that you should inquire into all such other matters as may appear to You essential to the useful prosecution and result of your investigations. AND for the purpose of enabling you, Our said Commissioners, to form a sound judgment on the premises, We do hereby authorise and empower you, or any two or more of you, to obtain infor-

mation thereupon, by the examination of all persons whom you may judge most competent, by reason of their situation, knowledge, or experience, to afford it, and also by calling for all documents, papers, and returns, which may appear to you, or any two or more of you, calculated to assist your researches. AND We do also give and grant unto you, or any two or more of you, full Power and Authority, when the same shall appear to be requisite, to administer an oath or oaths to any person or persons whatsoever to be examined before you, or any two or more of you, touching or concerning the premises. AND We do hereby command and require you, or any three of you, to report to us in writing, under your hands and seals, on or before the 10th day of April, or sooner, if the same can reasonably be, your several proceedings, by virtue of this Our Commission, together with your opinions on the several matters which you are hereby required to take into your consideration. AND We will and command that this Our Commission shall continue in full force and virtue, and that you Our said Commissioners, or any two or more of you, may from time to time proceed in the execution thereof, and of every matter and thing therein contained, although the same be not continued from time to time by adjournment. AND We hereby command all and singular Our Justices of the Peace, Sheriffs, Mayors, Bailiffs, Constables, Officers, Ministers, and all others Our loving subjects whatsoever, as well within our liberties as without, that they be assistant to you and each of you in the execution of all these Presents. AND further, We do hereby appoint our trusty and well-beloved *Harry David Jones*, Esq., Captain in Our Army, to be Secretary to this Our Commission, whose service and assistance We require you to use from time to time, as occasion may require. In witness whereof, We have caused these Our Letters to be made Patent.

Witness Ourselves at Westminster, the 20th day of October, in the Seventh Year of Our Reign.

By Writ of Privy Seal,

(Signed)

EDMUNDS.

FIRST REPORT.

TO THE KING'S MOST EXCELLENT MAJESTY,
&c., &c., &c.

WE, the undersigned Commissioners appointed by your Majesty, under date the 28th day of October, 1836, to inquire into the manner in which Railway Communications can be most advantageously promoted in Ireland, humbly beg to lay before your Majesty this our First Report, which we present thus early in obedience to your Majesty's commands.

We regret that, notwithstanding the strenuous efforts which we have used, we cannot, at the present moment, enter into such details, or furnish such documents, as would enable others to form a judgment on the measures which, in our opinion, it might be desirable to sanction in reference to this very important subject. We have, however, collected a great mass of information which we are arranging; and we believe that the principles on which we are pursuing this Inquiry will lead to practical and beneficial results.

When the very great importance of the matter submitted to our investigation—the valuable and, in many instances, conflicting interests which it involves—and the vast public injury which would arise from a false step at the commencement of a system that may produce a total change in the internal communication of this country—are considered, we are persuaded that the inconvenience of a short delay will be deemed preferable to the hazard we should run of recommending, upon an incomplete view of the subject, plans or projects which we might afterwards see reason to modify or alter. We hope to be able to terminate our Inquiry and to present a full Report in time to admit of the Legislature coming to a decision, during the present Session, on the measures which it may be desirable to sanction.

We proceed to explain the course which we have pursued, and, in some degree, the progress which we have made in this investigation.

In commencing our proceedings, we looked at the country with reference to the amount, distribution, and employment of its population; to the extent and value of its traffic, and the channels through which that traffic is at present carried on; to the size and position of its principal towns; their present communication; the number of public conveyances, and of the passengers that now travel by them. We looked at the country in reference to its physical features, and the facilities and impediments which these offer to the construction of Railways: and also to the comparative fertility of soil; the present produce; and the capability of improvement of its several districts.

On all these points we took immediate steps to collect the most accurate information which could be obtained from existing documents, public departments, and from those private individuals who possessed peculiar means of knowledge through the nature of their pursuits and occupations.

The Customs and Excise have afforded us valuable assistance; the Chairmen of both Boards having directed their Officers to prepare certain Returns relative to the trade of the country, which we shall be able to give in our Second Report. We have likewise been much assisted by the Constabulary, who, under the directions of Colonel Shaw Kennedy, have procured for us much useful information respecting the inland traffic in most parts of Ireland. It is due to many intelligent individuals of that service to bear our testimony to the zeal and efficiency with which the inquiries intrusted to them have been prosecuted. We have also received, in answer to circulars addressed to persons engaged in trade, some valuable com-

munications; and in those places and on those points where accuracy was most important, we have employed individuals accustomed to statistical inquiries to verify and extend the information obtained through these various channels.

With regard to the number of passengers travelling by coaches and cars, Returns are preparing under the direction of the Post-Office, and by Messrs. Parcell, Bourne, and Bisacconi, the principal proprietors of public conveyances in Ireland. These Returns will be useful, not merely as exhibiting the existing intercourse, but as exemplifying, particularly by the experience of Mr. Bisacconi, the proprietor of a very extensive establishment of stage-cars in the south of Ireland, the increase of intercourse which follows increased facility and diminished expense of communication.

At the commencement of our Inquiry, the want of a map of Ireland on which lines might be laid down with some degree of accuracy, offered a very serious impediment to our progress. There did not exist any on which the relative positions of leading towns, still less of inferior objects, were marked with the precision which our purpose required; and as to the features of the country, the delineation of them was, for the most part, extremely incorrect, often purely fanciful. This would have occasioned very considerable embarrassment, and increased the expense, as well as prolonged the period of our inquiry, had not the deficiency been supplied through the active co-operation of the Ordnance Survey Department for Ireland, under Colonel Colby. The survey of nine counties out of the thirty-two has been completed, and that of several others is in a state of forwardness. Colonel Colby, at our request, caused a diagram to be made of the whole of Ireland from the great triangulation, and a map to be compiled from the already completed portion of the Ordnance survey, and the best county maps which could be obtained. Many of these maps are extremely defective and inaccurate, particularly in shewing the relative positions of the towns; but this material imperfection has, in a great measure, been removed by means of the fixed points of the great triangulation.

The preparation of the map was intrusted to Lieutenant Larcom of the Royal Engineers, by whose unremitting exertions and ability the object has been effected; and we are now in possession of a map of Ireland far superior to any hitherto constructed, and which, even for general purposes, will be a most valuable acquisition to the public, during the period that will intervene before the Ordnance survey shall be completed. The labour and energy required to complete such a task in so short a time can be appreciated only by those who are conversant with the nature of similar operations.

Mr. Griffith's unpublished Geological Map of Ireland—a copy of which will accompany our next Report—has proved very useful and interesting in the prosecution of our inquiries.

The great limestone districts form one of the most important and characteristic features of this country. Besides indicating superior fertility of soil, they present universally the greatest facilities to the engineer. Being generally free from elevated ridges of ground, they present peculiarly favourable levels, and furnish excellent materials for the construction of works. Hence, in addition to the knowledge which this map affords of the geological structure and mineral products of the country, it has been of material assistance to us in pointing out those rich and populous districts which it would be at once most desirable and most easy to traverse by Railways.

In order to ascertain how far the objects which we had in view might be promoted by the previous inquiries of others, we applied for and have obtained plans and reports explanatory of the several projects which have been as yet brought before the public. We have also had the benefit of personal explanations from such of the engineers and principal promoters of those undertakings as we could meet with in Dublin.

As the investigation proceeded, we were enabled gradually, and, as we trust, on just and sure grounds, to determine the limits within which the principal lines of Railway should, in our opinion, be confined. And we then directed a detailed and particular examination to the districts contained within those limits.

We have been able to avail ourselves of the services of two eminent engineers, Mr. Vignolles and Mr. McNeil, a statement of whose proceedings shall accompany our next Report. These gentlemen have been for some time employed in ascertaining, by local examination, how far our propositions are practicable,—in what degree they are adapted to the attainment of our objects,—and whether or

not it might be desirable to alter or modify them in any respect. Their inquiries on many points have been brought to a close, and they have made considerable progress towards completing what remains of the task assigned to them.

We are also pursuing a course of inquiry with regard to the principles which should be observed in the construction of Railways. We shall endeavour to distinguish between those which ought to be enforced by legislative enactment, and those which might be left to the fancy or sagacity of the Directors and Managers of Companies.

Our consideration has been directed to the effects of gradients and curves, of the width of the lines, of the weight and strength of the rails, and of various other details of construction; effects which have not as yet been clearly ascertained, but on which the stability and economy of these works greatly depend, and which must materially influence the return on the capital to be expended in future undertakings of this kind. On all these points there can be little doubt that much knowledge yet remains to be acquired from future experience. But much has been already learned since the opening of the Liverpool and Manchester line, and many improvements have been introduced tending in part to increase the permanency of the works, and in part calculated to diminish the general expenditure. It shall be our endeavour to collect these important practical results, in the hope of aiding the progress of improvement in the construction and working of future Railways.

We have also on this subject communicated with the principal Railway Companies in England, and it is but justice to the directors and managers of those Companies to acknowledge the readiness with which they have answered our inquiries, and the valuable information and many useful suggestions which we have received from them.

In obedience to your Majesty's commands, we have entered into the examination of a very important and interesting question,—the establishing of a steam communication with America from the West or South West coast of Ireland.

In the present state of steam navigation, a voyage to New York from any port of Great Britain has been considered by many to be beyond the range of a steam vessel; whilst others are of opinion that such a voyage, though perhaps impracticable from Great Britain, might be effected from the Western coast of Ireland; and that, so far as regards passengers and the transmission of letters and light goods, such an intercourse might be established and conducted with great advantage. We are aware that steam vessels of a large size are now fitting out at Liverpool and Bristol for the purpose of attempting the direct voyage to New York; and we shall abstain at present from expressing an opinion on the relative advantages of different ports; but shall merely observe, that we have looked at the question as regards Ireland, thus, admitting that it is found advantageous to start from a port as far to the Westward as possible—in what direction and to what port should the Railway for effecting this object traverse Ireland? In this view of the question, the main consideration would be a rapid and convenient transit to the port of embarkation; and to that object the means which such a line would afford, of increasing internal traffic, must be regarded as altogether subordinate. But on the other hand, reversing the supposition, and regarding the promotion of inland intercourse as the primary, and the establishing a steam navigation with America as a secondary and perhaps remote object,—what line would for such a purpose be deemed the most eligible? If we have succeeded in coming to just conclusions on both these points, we shall be enabled to say whether the two purposes might not be essentially attained through the medium of one common line.

In pursuance of our instructions, we have also considered in what manner the most rapid and certain communication between London and Dublin might be effected. We are not as yet in possession of sufficient information respecting the different projects advanced for accomplishing this object, to venture an opinion on their relative merits. All Railway projects in Ireland will of course be greatly promoted by the establishment of such a communication, but advantageous intercourse with America by steam from the West coast of Ireland cannot be contemplated without it.

Having thus explained the course which we have followed, and, to a certain extent, the progress we have made, we proceed to lay before your Majesty some of the general opinions which we have formed during this investigation.

The first and most important conclusion at which we have arrived is, that the intercourse in Ireland is not at present, nor is likely, for many years to come, to be

of that constant and active kind which would justify the expectation that Railways spread over the country in distinct lines from town to town, would prove remunerative undertakings. In that respect we fear they would be total failures; and unless remunerative, not only would such undertakings be directly injurious to the community, by the amount of capital taken out of productive circulation, but the losses and disappointments of those embarking in them could scarcely fail to occasion a general want of confidence, which would greatly impede, if it did not prove altogether fatal to the most legitimate and well founded enterprises.⁶

Deeply impressed with this conviction, we would humbly but earnestly suggest that the most searching inquiry should be made into the grounds on which these separate Companies rest their hopes of success, before they obtain the sanction of the Legislature. We believe that in the greater number of instances the most important public objects which they all profess might be accomplished at a much less expenditure of capital, and at a very moderate sacrifice of time and space, as regards individual places, by a well-combined and judicious system of Railways, in which the joint traffic of many places and districts should be made to pass to a great extent over one common line, and where the greatest general accommodation should be attained at the smallest outlay. We shall not say that such a system alone can be profitable; but we do assert, without fear of contradiction, that, looking to the present circumstances of this country, it affords by far the most reasonable hope of a fair return on the capital expended. If economy of expenditure is necessary in England, it is indispensable in Ireland, where capital is less abundant, intercourse more languid, and traffic less active.

There are also circumstances peculiar to Railways worked by locomotive steam-engines which impose an additional necessity for circumspection. On Railways where animal power is the motive agent, the profit will be nearly proportioned to the traffic; but where steam is employed small weights are moved at a great and ruinous expenditure of power, and it is not till the traffic becomes very considerable that the use of steam becomes profitable, and it is only when the intercourse is active and abundant that the superiority and economy of steam are fully experienced. We believe that the contemplation of its wonder-working power under such circumstances has caused the disadvantages of using it in less favourable cases to be very much overlooked. Hence the importance and necessity of endeavouring to devise a system that shall combine and concentrate the traffic and intercourse of many places. A small increase of distance adds but little to the expense of conveyance, and when the transit is rapid, still less to the time.

The selection of such great public lines ought not to be left to private parties or Companies. There are many interests involved demanding the most impartial consideration; and it is not by selecting a line to some large town, and conferring upon it the imposing title of a Grand Trunk line that the object for which we are contending is to be accomplished. We are not insensible to the danger of fettering commercial enterprise; but parties who promise benefits, and seek privileges in return, have no reason to complain if their capability of fulfilling their engagements to the public be rigidly scrutinized. And further, if the inquiry be pursued with a view to determine whether the promised advantages may not be obtainable at a less expenditure of the national capital than in the manner which they propose, sufficient is known of the mode in which many Railway schemes are got up, to justify the adoption of every precaution to protect the country against those which it may be profitable to speculators to project, but ruinous to shareholders to execute.

The past history of public works in this country is not calculated to excite any very sanguine expectation on the part of the speculative capitalist. Instead of being referred to as encouraging examples of successful enterprise, they can only be pointed out as beacons to warn him against embarking in similar undertakings.

It is because an opportunity now offers of removing the injurious impression produced by these failures, and of introducing a system of communication capable of conferring, under due precautions, vast benefit on this country. It is because we are strongly impressed with the conviction that a false step at the commencement might deprive the country for many years to come of advantages now within its reach; and because, in regard to this important matter, we dread the consequence of indulging in extravagant expectations, and of rushing into inconsiderate speculations—that we would humbly but most earnestly express a hope that the sanction

⁶ Short lines, such as that between Dublin and Kingstown, connecting large and populous towns with the adjacent harbours or watering-places, will of course be exceptions.

of the Legislature may not be given to any great line of Railway in Ireland till the most careful inquiry has shown that the statements of its promoters are grounded on sound views and accurate data, and that of all others it is the best adapted to effect the public objects for which it is proposed, and the most likely to afford a profitable return on the capital expended in its execution.

But whilst we recommend the utmost caution in deciding upon individual projects, we would also humbly represent to your Majesty the necessity of affording peculiar encouragement to the prosecution of Public Works in Ireland.

The great natural capabilities which the country presents, the little exertion that has yet been made either from public or private sources to develop them, the amount of the population so far exceeding the ordinary demand for labour, and, on that account, exposed to periodical sufferings of the most harrowing and deplorable description—are circumstances fully ascertained and acknowledged. It would appear, therefore, just and reasonable, whether regarded as a question of policy or of duty, that while effective means are taken to check and avoid deceptive speculations and needless expenditure, every possible aid and facility, consistent with prudence and the interest of the United Kingdom, should be extended to public undertakings, the utility of which shall have been clearly established.

Among the obstacles which an enterprise, such as we are immediately considering, must encounter at the very commencement, are, the delay interposed, and the enormous outlay that must take place before even a spade can be put into the ground towards its execution. This delay and expenditure are at present unavoidable; for they arise in a great degree from the provisions of the new Standing Orders in Parliament, which must, in every instance, be strictly and fully complied with.

The Legislature has deemed it right to require plans to be lodged, and notices, to a very great extent, to be served; and when these directions have been observed, an interval of twelve months must afterwards elapse before application can be made for leave to bring in a Railway Bill. The Standing Orders which relate to these objects were framed chiefly with a view to the protection of the owners and occupiers of property likely to be affected by such undertakings. But there are few establishments in Ireland which could be injured by the operation of such works, whilst property in general, and more especially that in their immediate neighbourhood, far from being deteriorated, would be greatly increased in value. We therefore humbly suggest that it may be desirable to examine whether some of those Standing Orders might not be relaxed, simplified, or dispensed with, as far as regards the introduction of Bills for Ireland.

In the progress of this inquiry, our attention has been directed to the manner in which Railway Bills are prepared, and to the great inconvenience and expense which arise from their length and complexity. It would tend much to remove this objection if all the provisions which are common to every measure of this kind, and, in fact, constitute the general principles on which it is the manifest intention of the Legislature uniformly to ground its enactments with regard to Railways, were embodied in one general Act, applicable to every case. If this were done, a Bill for a particular Railway would only be required to set forth its own specific features and provisions, which might be contained within a very small compass; and thus, not only would legislation on these subjects be rendered much more simple, but the preliminary expenses, which now fall so heavily on the projectors, would be greatly reduced.

Having now pointed out the advantages which might naturally be expected to result from the encouragement of well-founded enterprises of this kind in Ireland, it is right that we should advert, on the other hand, to the protection which the public would be entitled to demand against abuse of the power usually conferred on private Railway Companies.

It is manifest that wherever this superior mode of intercourse shall be established, it will supersede all others, both as a conveyance for passengers and with respect to many other most important purposes. A monopoly will consequently be established, as far as those purposes are concerned; and hence great evils may arise from committing, without control, the management and regulation of Railroads to the power and discretion of individuals or Companies, whose chief consideration would be their own private profit and advantage.

Among the most obvious of the evils to be apprehended we may enumerate the following:—

1stly.—The charges might be exorbitant.

2ndly.—The speed might be reduced to a rate not much surpassing that of ordinary road travelling.

3rdly.—The passengers might be exposed in various ways to inconveniences and irregularities; such as uncertainty as to hours, delays on the road, and vexations or rude treatment.

4thly.—The carriages might be neglected and uncomfortable, and the road kept in an imperfect, or even dangerous, condition.

5thly.—The interest and accommodation of branch lines might be sacrificed, or at least postponed, to those of the main line.

These evils might not be all present together on any one line; but it is probable that they would, in a greater or less degree, be felt and experienced in all.

Another, and very important, consideration is, that the power given to Railway Companies places the service of the mails entirely at their discretion. There is nothing to prevent their securing, in their respective lines, a great part of the revenue of the Post-Office; for the letters must be carried by them, and they might exact what terms they pleased in the existing state of the law.

Competition, the usual corrective of such abuses, can, in these cases, be rarely resorted to; and although Managers and Directors of Companies, who took an enlightened view of their duty to the public, or even of their own interests, would not suffer them to exist to any great degree, yet we fear that it would not be safe to trust entirely to such motives for protection; and hence it becomes important to consider by what means these evils may be guarded against, without imposing injurious restrictions on private enterprise.

In Ireland, where Railway communication must, for a length of time, be restricted to a few main lines, such protection would be indispensable. We shall endeavour, in a subsequent Report, to offer some suggestions towards effecting this very desirable object.

In concluding these observations, we humbly beg to assure your Majesty that we shall continue to pursue our inquiry with unremitting diligence. We regret that our researches being only in progress, our materials imperfectly collected, and our opinions on many points not sufficiently matured, it has not been possible for us to do more in this Preliminary Report, than indicate the course of investigation which we are following. We are fully sensible that the subject is one which requires to be treated with great caution and deliberation. Aware of the extensive interests at stake, and of the anxiety with which our Final Report is looked for by many of the parties engaged in or affected by these speculations, we shall spare no pains to forward our inquiry; and we venture to express a confident hope that we shall be able to complete our Final Report in the month of May. We could have wished that we had been at liberty to devote a much longer period to so important and intricate a subject; and we are deeply sensible of the many defects and omissions inseparable from the rapidity with which our proceedings have necessarily been conducted. We trust, however, that, by the time above-mentioned, we shall be able to lay down the lines which shall appear to be the best adapted to promote the great objects in question, and to complete the documents which may be necessary to enable those to whom your Majesty may refer the consideration of our Report, to judge of the recommendations which we shall venture to make, as well as of the opinions which, in obedience to your Majesty's command, we shall deem it our duty to express on the various projects now before the public.

We humbly submit this, our First Report, to your Majesty's consideration.

T. DRUMMOND.
J. F. BURGOYNE.
PETER BARLOW.
RICHARD GRIFFITH.

Dublin, 11th March, 1837.

HARRY D. JONES, *Secretary*.